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RUEHLM/AMEMBASSY COLOMBO 0683  
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RUEHKO/AMEMBASSY TOKYO 0052  
RUEHMO/AMEMBASSY MOSCOW 0058  
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RUCPDO/DEPT OF COMMERCE WASHINGTON DC  
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RHEHAAA/NATIONAL SECURITY COUNCIL WASHINGTON DC

UNCLAS SECTION 01 OF 05 MUMBAI 002064

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DEPT. OF ENERGY FOR U/S GARMAN, S. JOHNSON, T. CUTLER, A. SCHEINEMAN  
DEPT OF COMMERCE FOR U/S F. LAVIN, A/S VINEYARD, J. NEUHOF

E.O. 12958: N/A

TAGS: [PREL](#) [PARM](#) [TSPL](#) [KNNP](#) [ETTC](#) [ENRG](#) [TRGY](#) [PGOV](#) [ECON](#)  
BEXP, IN

SUBJECT: NPCIL OUTLINES ITS VISION OF INDIA'S NUCLEAR FUTURE AT  
LARGEST EVER MEETING OF U.S. AND INDIAN NUCLEAR INDUSTRIES

REF: A: Mumbai 1975; B: Mumbai 1803

MUMBAI 00002064 001.2 OF 005

1. (U) This is an action request. See paragraph 14.

Summary

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12. (SBU) India hopes to import 20 to 25 foreign nuclear reactors in the coming decades, the head of the country's nuclear power utility told over 25 U.S. companies from the nuclear sector on December 1 in Mumbai. S.K. Jain, chairman of the state-run Nuclear Power Corporation of India (NPCIL), said India had increased to six the number of "nuclear parks," all of which he named, that it will build on India's coastline to house the foreign reactors. Jain confirmed that the NPCIL already has GOI approval for two of the sites. NPCIL officials emphasized privately that U.S. vendors were still in the running for one site where the French company Areva had done preliminary work for the NPCIL. NPCIL officials said India would welcome reactors from both General Electric and Westinghouse, and was prepared to be the first country to build the newest reactors offered by the two companies. When importing foreign reactor technology, India would pursue "phased Indianization" to ensure technology and know-how transfer over time, Jain said. He doubted whether India's nodal nuclear power authority would

permit private nuclear power generators until the NPCIL reached a bottleneck in its expansion plans. He also emphasized that the GOI understood U.S. firms' concerns on nuclear liability and was preparing appropriate legislation. The companies accompanied Commerce U/S Frank Lavin to Mumbai as part of DOC's Business Development Mission. The atmosphere at the path breaking day-long event hosted by NPCIL, the largest ever such gathering between U.S. and Indian firms involved in commercial nuclear power, was open and cordial, and laid the groundwork for future civil nuclear cooperation with potentially tremendous commercial benefits for the U.S. At the same time, U.S. firms remained concerned that French and Russian companies might be the first to benefit from the successful passage of the civil nuclear initiative. End summary.

#### Cordial, Open Atmosphere Reigns at Commercial Nuclear Event

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¶3. (U) Over 25 U.S. companies from the nuclear energy sector accompanied U/S Frank Lavin to the Business Development Mission on Nov. 29-Dec. 1 in Mumbai. The group included top-level executives of General Electric, Westinghouse, nuclear fuel suppliers and companies involved in the design, construction and administration of nuclear power plants. Several of the delegates visited the Tarapur nuclear power station near Mumbai, and on Dec. 1 the group had a full day of interaction with the Nuclear Power Corporation of India (NPCIL) and with Indian companies that support the NPCIL's design, construction and operational activities. The atmosphere was relaxed, open and cordial, and marked the first time that most of the U.S. companies had interacted with India's commercial nuclear community. A smaller group met with Department of Atomic Energy

MUMBAI 00002064 002.2 OF 005

(DAE) Chairman Anil Kakodkar on December 2 (septel).

#### Six "Nuclear Parks" Planned For Foreign Reactor Technology

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¶4. (SBU) NPCIL chairman S.K. Jain gave the U.S. companies an update of India's plans to import nuclear reactors and technology once the civil nuclear initiative creates an enabling environment. India now hoped to create 60 gigawatts (GW) of nuclear generation capacity by 2032, Jain said. The country could not achieve that goal with its indigenously developed pressurized heavy water reactor (PHWR) technology and its planned fast breeder program, he said. To make up the shortfall, the NPCIL needed to import 20 to 25 foreign light water reactors (LWR) with a capacity of 1 to 1.6 GW each. Confirming his earlier discussions with the USG on the NPCIL's expansion plans (ref A), Jain said his company planned to bundle foreign-built reactors in individual "nuclear parks," each housing six to eight reactors generate a total of 6 to 8 GW. For cost control and design efficiency reasons, the NPCIL would not mix different foreign technologies at each site, he added.

¶5. (SBU) Jain said the NPCIL hoped to establish such parks at 6 coastal sites. He confirmed earlier reports (ref B) that the NPCIL had received GOI approval for nuclear parks at Jaitapur in southern Maharashtra and Kudankulam in Tamil Nadu, where two Russian LWRs are currently under construction. An interagency site selection committee led by the NPCIL had identified a further four sites, Jain said. They were Mithilirdi in Gujarat, Haripur in West Bengal, Patiswapur in Orissa and Kovvada in

Andhra Pradesh.

16. (SBU) In separate discussions on the margins of the formal presentation, Jain and other top NPCIL officials told Congenoffs that the company had not yet decided on specific foreign technologies for each site. Several officials conceded, however, that the Kudankulam site is reserved for Russian technology, since two Russian reactors are already under construction and coming on line in 2007. No decision on Jaitapur had been made, they emphasized, although they confirmed reports that the French company Areva had helped the NPCIL perform preliminary survey work at the site.

Do U.S. Companies Still Have a Chance at Jaitapur?

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17. (SBU) The NPCIL would "soon" decide on the reactor technology for the Jaitapur site, Sudhinder Thakkur, the company's executive director for corporate planning, told Congenoff. He emphasized that U.S. firms remained in the running and that the NPCIL was willing to discuss whatever was possible for GE, Westinghouse and others under U.S. law. Once the NPCIL

MUMBAI 00002064 003.2 OF 005

committed to a specific reactor design and did the other necessary homework, it would approach India's Atomic Energy Regulatory Board (AERB) for concrete approval to build and operate a plant at Jaitapur. Thakkur would not say when the NPCIL planed to commit to a specific reactor design, but only stated that AERB approval normally took up to 36 months. Separately, Timothy Richards, GE's director for international energy policy, told Congenoff that his company still felt it had a chance at the Jaitapur site.

18. (SBU) The planning for Jaitapur was the most advanced of that at any of the proposed nuclear parks, several officials told us. When selecting a site, the NPCIL must first identify a potential location and obtain approval "in principle" from the GOI, Thakkur explained to us. It then formulates a design for the specific site and approaches the AERB and Ministry of Environment and Forests for approval. The NPCIL had yet to receive GOI approval for the four additional sites, Thakkur said, but that process normally took 9-12 months. The NPCIL's site selection committee was preparing reports on each site that will soon be sent to India's Atomic Energy Commission for approval. Thereafter the Prime Minister's Office will make the final decisions in consultation with the respective state governments, he said. He did not indicate when that might happen, but only said the company hopes to move quickly.

Is There Room for Both GE and Westinghouse?

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19. (SBU) NPCIL management gave conflicting signals on whether it would buy reactors from both GE and Westinghouse, or concentrate on only one U.S. reactor. During a roundtable discussion with GE and Westinghouse, S.K. Agrawal, NPCIL project director, said his company could envisage separate parks for both U.S. vendors. However, officials told both Emboff and GE that NPCIL would focus on only one vendor each from the U.S., France and Russia. Nonetheless, both Jain and Agrawal emphasized that U.S. reactor designs had a competitive advantage because the AERB used many

regulatory norms of the U.S. Nuclear Regulatory Commission (NRC) and even compelled the Russians in Kudankulam to follow NRC standards and reformulate documentation and safety reports to comply with NRC formats. The AERB and the NRC had a long history of co-operation (including the current placement of two AERB personnel in NRC), and NPCIL therefore anticipated quicker regulatory clearances with regard to U.S. reactors, Jain told us.

#### A Strategy of "Phased Indianization"

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¶10. (SBU) To speed up the process of buying foreign reactors, the NPCIL would desist from open tenders and conduct one-on-one negotiations with selected vendors, Agrawal said. Localization and technology transfer were the chief priorities for the

MUMBAI 00002064 004.2 OF 005

selection of a technology provider. Price and resulting tariff rates ("the grid will pay anything we ask," one NPCIL official told us) were a second priority. When working with foreign reactor vendors, Agrawal told GE's Tim Richards and Westinghouse's Ed Cummings, the NPCIL would pursue a strategy of "phased Indianization." Initially, the NPCIL would purchase a complete reactor and as many foreign-built auxiliary components as necessary. Over time, however, the company planned to indigenize both development and construction of components and tailor a given imported technology to the NPCIL's specific needs and preferences. Agrawal said the company, and the AERB, preferred known and proven technologies. Responding to a direct question by Westinghouse's Cummings, however, Agrawal said India was prepared to build separate plants using both GE's new Economic Simplified Boiling Water (ESBWR) and Westinghouse's AP-1000 reactor technologies, both of which have yet to be built anywhere in the world. The NPCIL and India's strategic planners recognized that the country could not afford to rule out modern and path breaking new reactor designs. He stressed that, in any case, the NPCIL would take charge of the planning and construction process. Allowing a foreign company to control the entire process would not result in the desired technology and know-how transfer, Agrawal said.

#### Private Participation in Nuclear Power Generation

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¶11. (SBU) Several U.S. participants asked about the possibility of private players entering the nuclear power generation business. Jain pointed out that, under current Indian law, private companies could have up to 49 percent ownership in a nuclear power utility. The Department of Atomic Energy would need to approve any public private partnerships, which could only occur with NPCIL or Bhavini (the state company charged with building and operating India's fast breeder reactors). Privately Jain doubted whether the DAE would do so in the foreseeable term. The DAE must also give consent to any other public sector utilities, such as the National Thermal Power Corporation, that want to enter the nuclear energy market. Amendments to the Atomic Energy Act were currently being prepared that would allow 100 percent private participation, but publicly Jain said he didn't expect this to pass until NPCIL reaches a bottleneck and cannot build any more reactors on its own.

#### Nuclear Liability

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¶12. (SBU) The U.S. participants repeatedly emphasized that nuclear liability was the sine qua non for their ability and willingness to sell nuclear technology to India. Jain and others said that the GOI clearly understood the issue and was in the process of preparing draft legislation that will limit vendor liability.

MUMBAI 00002064 005.2 OF 005

Comment  
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¶13. (SBU) The top leadership of the NPCIL and its major Indian suppliers spent the entire day with the U.S. companies, and were eager to emphasize their interest in U.S. civil nuclear technology. The company's ambitious expansion plans and the country's hunger to acquire and "Indianize" the world's most advanced reactor technology will no doubt create tremendous commercial opportunities for many of the U.S. firms present at the meeting once the civil nuclear initiative creates an enabling environment. Nobody doubts that the U.S. nuclear industry will get its park, or parks. The big question is when. Many of the U.S. firms present, particularly Westinghouse and General Electric, fear that their French and Russian competitors could be the first to benefit commercially from the enabling environment that U.S. diplomacy has created. During the interactions with the Indian industry, reps from both U.S. vendors reiterated how existing U.S. export controls prevent them from conducting the type of substantive discussion that Areva apparently had with the NPCIL. The NPCIL's stance at the event made it clear that the company would welcome an Areva-like dialogue with Westinghouse and GE.

Action Request: The Way Forward  
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¶14. (SBU), Mission India encourages Washington to begin the interagency discussion that will lead to the liberalization of the export controls that currently prevent our nuclear industry from competing equally in the next phase of India's nuclear future. With the legislation now completed, we recommend that Washington consider easing regulations as an intermediary step before the congressional approval of the Agreement for Peaceful Nuclear Cooperation (123 Agreement). We also urge Washington to take up a suggestion that DAE Chairman Kakodkar made to U/S Lavin (reported septel) to stage a conference dealing with export control policies and other issues related to the blossoming civil nuclear cooperation between the U.S. and India.  
End comment.

¶15. (U) Embassy New Delhi and FCS New Delhi cleared this cable.  
OWEN